

PART SIX: INTERMEDIA

"Shall we... use the new art as a vehicle for a new message and express the human longing which light has always symbolized, a longing for greater reality, a cosmic consciousness, a balance between the human entity and the great common denominator, the universal rhythmic flow?"

THOMAS WILFRED

The Artist as Ecologist

For some years now the activity of the artist in our society has been trending more toward the function of the ecologist: one who deals with environmental relationships. Ecology is defined as the totality or pattern of relations between organisms and their environment. Thus the act of creation for the new artist is not so much the invention of new objects as the revelation of previously unrecognized relationships between existing phenomena, both physical and metaphysical. So we find that ecology is art in the most fundamental and pragmatic sense, expanding our apprehension of reality.

Artists and scientists rearrange the environment to the advantage of society. Moreover, we find that all the arts and sciences have moved along an evolutionary path whose milestones are Form, Structure, and Place. In fact, man's total development as a sentient being can be said to follow from initial concerns with Form or surface appearances, to an examination of the Structure of forms, and finally to a desire to comprehend the totality of relationships between forms, that is, Places. Since it generally is thought that art represents the avant-garde of human insight, it is interesting to note that science itself has evolved through Form, Structure, and Place appreciably in advance of the arts.

The conception of the principle of the atom by the Epicureans in Greece approximately 2,000 years ago began that stage of science chiefly concerned with Form, which included the contributions of Euclid, Descartes, Copernicus, and Kepler. The Structural phase of science might be epitomized by Newton and Clerk Maxwell, although we must leap forward in time and include Rutherford and Bohr, who found a structural model for the atom in the planetary system. The stage of science that I've designated as Place is represented by Einstein and Max Planck, and has to do with space/time, synergy, and entropy, all of which subsume both Form and Structure.

If further evidence is desired, one need only examine the technology of the respective scientific eras. As Bronowski has pointed out, a characteristic invention of the Scientific Revolution was the

telescope, which Galileo demonstrated in 1609, a tool for perceiving form. A characteristic invention of the Industrial Revolution was the power machine to perform the routine work of the human muscle, thus a structural tool. And the characteristic invention of the Cybernetic Revolution into which we are moving is the digital computer, which does the routine work of the human brain: the cerebral realm is the "Place" in which all experience resides.

It is interesting to note that the terms *economy*, *ecumenical*, and *ecology* share a common Greek root: *oikos*, a house. Following a period of Karmic Illusions (pre-Space Age history), the Renaissance Man emerges from his cocoon with difficulty (the generation gap) to find himself the master of a whole house and attendant guest cottage (the moon), and with nothing to do—the Leisure Problem. So the artist, not the politician, finally is accepted as the true legislator of mankind. Today's artists work empirically with problems of leisure and decision-making. Men like Robert Rauschenberg, Robert Morris, and Robert Whitman are concerned more with the personal responsibility of their audience than with creating objects to be "owned," since ownership is seen as an irresponsible concept when the obvious need is for global synergy. So we see that Duchamp's penetrating description of art as "defined by context and completed by the spectator's response" anticipated the present symbiosis of artist and ecologist.

That description also anticipated the burgeoning of intermedia art as one of the most significant developments of twentieth-century society. Buckminster Fuller has differentiated *mind* from *brain* by demonstrating that the brain performs "special case" functions on individual, discrete bits of information, whereas mind is concerned with "general case" metaphysical relationships and implications. In our discussion of intermedia art I intend to present the general case. This approach begins with the word itself: I might have used *mixed media*, certainly a more common and identifiable term; but an environment in which the organisms are merely mixed is not the same as an environment whose elements are suffused in metamorphosis.

During the 1960's a group of artists and engineers, working under the name USCO, pioneered in the development of multimedia performances and kinaesthetic events throughout the United States, Canada, and Europe. More recently, Gerd Stern and other members

of USCO have joined with a group of behavioral scientists from Harvard University to form the Intermedia Systems Corporation, whose purpose is to ". . . explore multi-channel audio-visual techniques and design of facilities, hardware and software" primarily for use in education, but with a view toward entertainment as education. Since education is the obvious direction in which virtually all communication is trending, perhaps this group's definition of the word intermedia would be most appropriate here: "Intermedia refers to the simultaneous use of various media to create a total environmental experience for the audience. Meaning is communicated not by coding ideas into abstract literary language, but by creating an emotionally real experience through the use of audio-visual technology. Originally conceived in the realm of art rather than in science or engineering, the principles on which intermedia is based are grounded in the fields of psychology, information theory, and communication engineering."

For some time now it has been clear that intermedia art is trending toward that point at which all the phenomena of life on earth will constitute the artist's palette. It is the purpose of this chapter to illuminate the direction of that trend and to cite a few pertinent examples. As with all other Paleocybernetic phenomena, the direction is simultaneously toward inner and outer space, the microcosm and the macrocosm. On the one hand, intermedia environments turn the participant inward upon himself, providing a matrix for psychic exploration, perceptual, censorial, and intellectual awareness; on the other hand technology has advanced to the point at which the whole earth itself becomes the "content" of aesthetic activity. The term "light show" must now be expanded virtually to include the aurora borealis, since hemispherical lumina displays are possible in the creation of artificial plasma clouds in space (see color plates), the launching of rockets to generate atmospherical events, or urban environmental generators such as Nicholas Schoffer's monumental *Cybernetic Light Tower*, which transforms the skies of Paris into panoramic fantasias of color.

Implicit in this trend is another facet of the new Romantic Age. The new consciousness doesn't want to dream its fantasies, it wants to *live* them. The child of the Paleocybernetic Age intuits that his life could be a process of nonordinary realities if the energies of the



Stan VanDerBeek with multifaceted surface for multiple-projection intermedia environment. Photo: Richard Raderman.

globe were properly distributed. We're developing all these fabulous hardware systems that soon will make life a process of continual myth-generation for the individual as well as the collective ego.

"We're just fooling around on the outer edges of our own sensibilities," says Stan VanDerBeek.

Unconsciously we're developing memory storage and transfer systems that deal with millions of thoughts simultaneously. Sooner than we think we'll be communicating on very high psychic levels of neurological referencing. It's becoming extremely rich. This business of being artist in residence at some corporation is only part of the story; what we really want to be is artist in residence of the world, but we don't know where to

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Stan VanDerBeek presides over intermedia presentation at his Movie Drome in Stony Point, N.Y.
Photo: Bob Hanson.

apply. Major internationalizing by artists is going to become very important, and so will the myth-making process. What we're looking for in some sociologically appropriate way is a third side to each confrontation: a way to deal with each other through a medium.

All media, like the automobile and telephone, are essentially a third party which relates us to whatever else it is we're doing. I think the student riots are a manifestation of a deep-seated awareness of this problem. There's such a contagiousness now with rioting; I think we realize that rarely do we directly deal with issues, personally, physically, intimately, with real body contact. That could easily be the cause, or at least partial cause, of the riots. We suddenly realize that riots may be the only real form of theatre left in which we're not just an audience.

But, you see, being an audience is necessary. A major factor in living in an overpopulated world is that we really *cannot* deal with each other directly. As the Japanese do, for example. They've spent thousands of years cultivating this idea that they're there but they're not there. Because they've been jammed together for a long time, they've learned how to do it. Now our culture is moving in that direction also. That's one reason for all these transfer systems—photo-reality, mock-reality, artificial intelligence, whatever term you choose—are spontaneously and unconsciously evolving. It's a tremendous urgent unconscious need to realize that we can't really see each other face to face. We only see each other through the subconsciousness of some other system. Cybernetics and the looping-around of the man/machine synergy are what we've been after all along. Who knows, but certainly for the last thousand years man has been inching toward that point, and now we're running full speed. And, of course, the machines we're running toward can trip us up as easily as not. We really can't be certain. But movies are the ultimate illusionistic system. I'm working more and more with tools that show it can go far beyond its present form. Holograms obviously are a key direction to go into: where things are stored on a molecular level.

World Expositions and Nonordinary Reality

In this forthcoming global activity of continual myth-generation, dramatic-fiction cinema will find a new and vital role to play. Although obsolete in one respect it will become enriched in another. While videotape cartridges and cable television will bring conventional cinema into the home on an individual level, society will seek its communal mythic experiences in elaborate intermedia environments found today only at world expositions where the average citizen is able to experience, for a limited time, the wealth and inventiveness that is kept from him in everyday existence.

"There's a basic human need for a communal experience of vision," observes Roman Kroitor, who developed the spectacular *Labyrinthe* for Expo '67 at Montreal. Kroitor's Canadian firm, Multi-screen Limited, has perfected a revolutionary projection system to be included in a chain of local theatres with screens seven stories high. The process, originally called Multivision, was developed for Expo '70 in Osaka. It involves 70mm. film projected horizontally rather than vertically. Through what is known as the "rolling loop" or "loop-wave" method of film transport, the Multivision projector throws an image as high as the ordinary 70mm. frame is wide (each frame of Kroitor's film is the size of a postal card and has fifteen sprocket-hole perforations). The rolling-loop system removes virtually all tension from the film during transport through the projector at 336 feet per minute, stopping and starting every twenty-fourth of a second. Thus it is possible to project a seven-story image of perfect steadiness and crystal clarity.

As the name Multivision implies, the movie contains from three to several dozen independently-moving images on the screen simultaneously, thus approaching on an environmental scale what had existed in 16mm. synaesthetic cinema for decades. Here, however, the synaesthetic experience is three times the size of Cinerama and encompasses a ninety-degree span of vision from any location in the theatre. "New kinds of storytelling and new audience tastes will result from this technology," Kroitor said. "People are tired of the standard plot structure. New film experiences will result, in which there'll be a tight relationship between



Chamber One of Roman Kroitor's *Labyrinthe* at Expo '67, Montreal, Canada. From eight balconies on four levels on either side of the space, the audience could see a huge screen on the floor and another perpendicular to it. Both screens were approximately forty feet long. Some 288 speakers surrounded the audience.

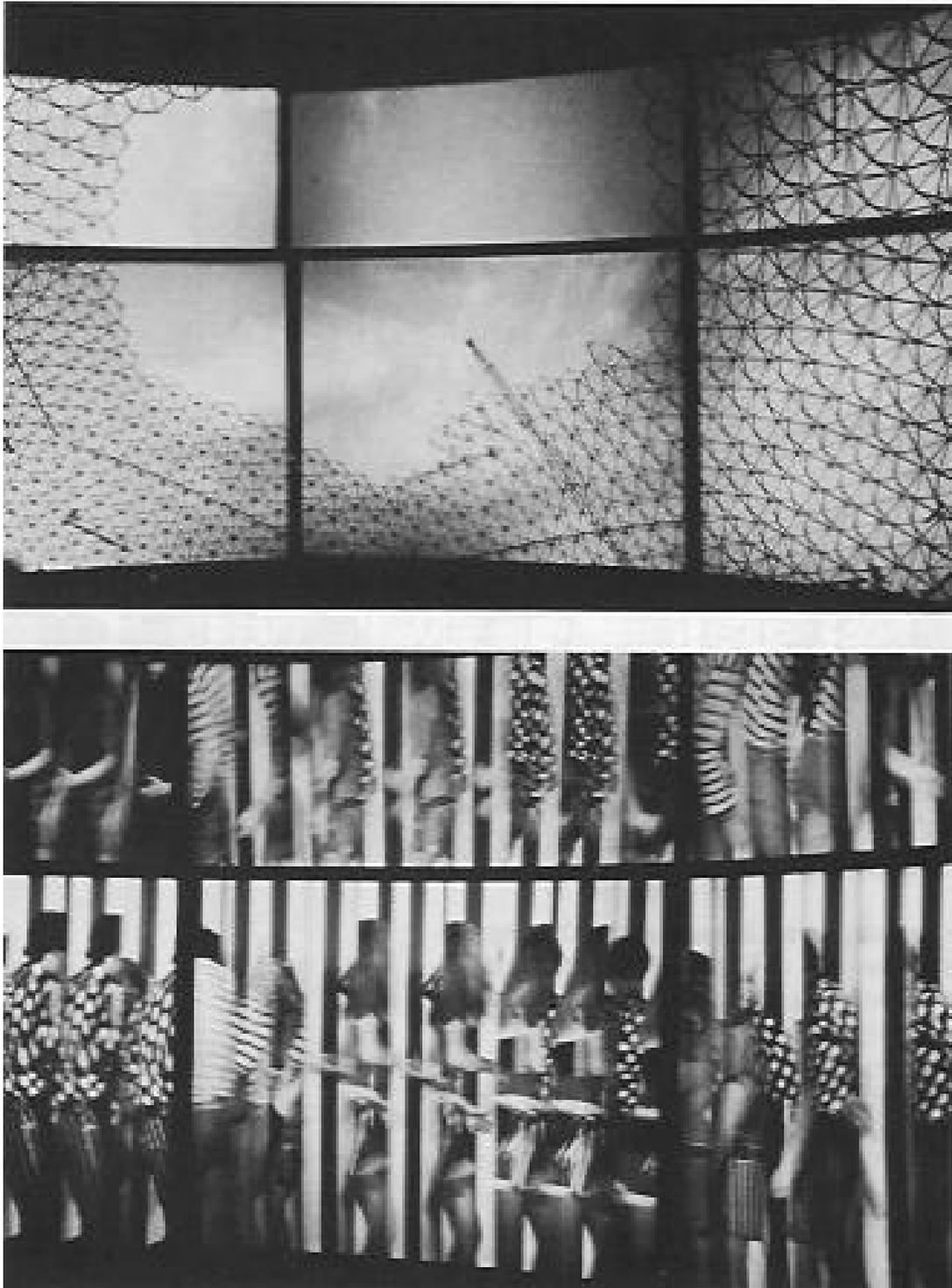
Photo: courtesy of the National Film Board of Canada.



Chamber Three of *Labyrinth*, in a five-screen cruciform arrangement. Photo: courtesy of the National Film Board of Canada.

the movie and the architecture in which it's housed. We took a step in that direction with *Labyrinth*. A new language is going to develop. There are ways in which shaping the relationships of images cuts through the superficial realities and reaches for something deeper."

Francis Thompson, a pioneer in large-scale multi-image film techniques, currently is working toward both micro- and macro-environmental experiences. "We're interested in films expanding and swallowing a huge audience," he said, "but we're also interested in pictures the size of a wristwatch. We would like to make the world's smallest motion picture as well as the largest. As regards the idea of expanded cinema, I would like to make a theatre that would be a huge sphere, as big as Radio City Music Hall or larger, and seat the

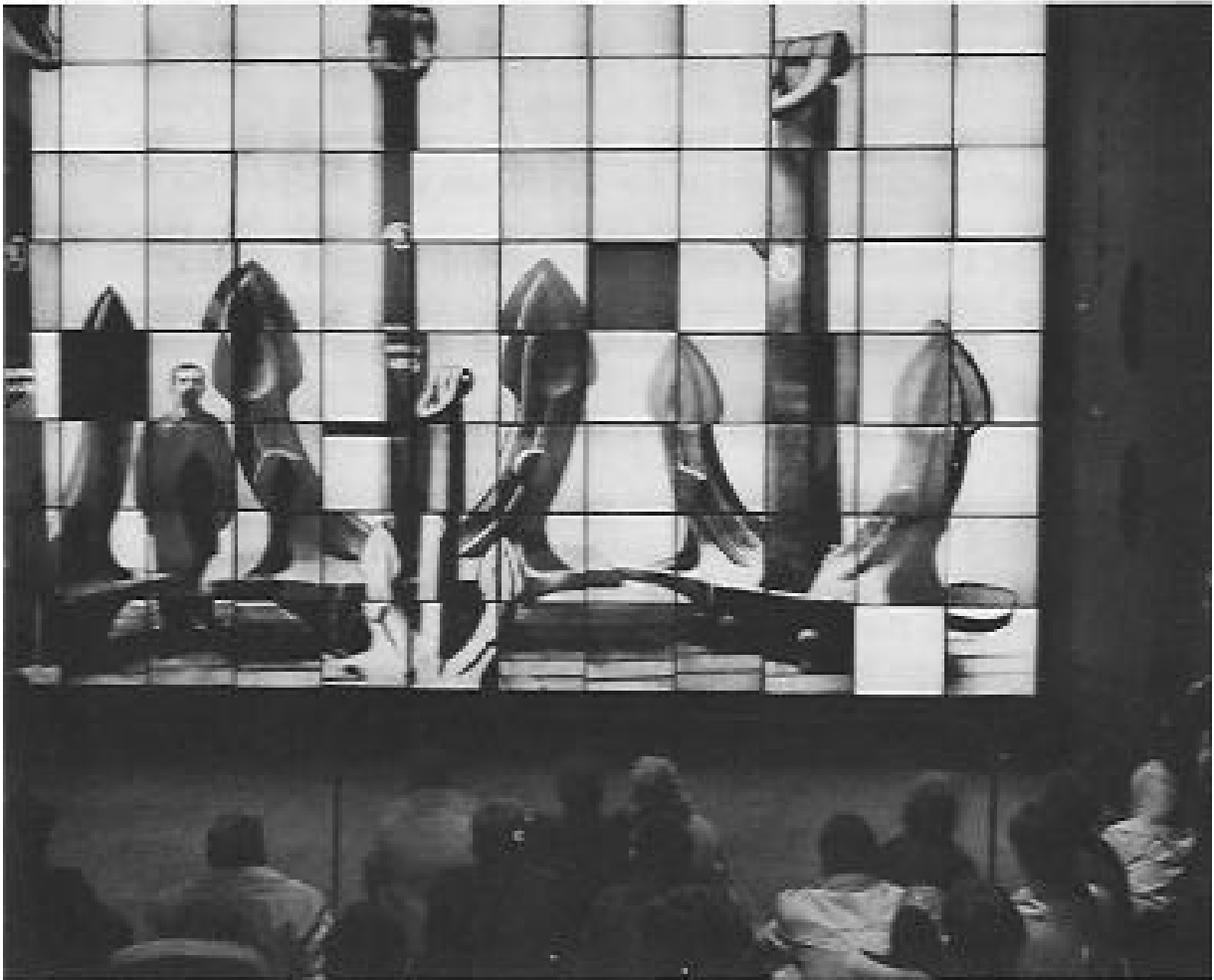


Two scenes from Francis Thompson's *We Are Young* for the Canadian Pacific-Cominco Pavilion at Expo '67. The six-screen arrangement covered a total area of 2,952 square feet. By comparison, normal commercial theatre screens average 450 square feet.

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The Diapolyceran Screen at the Czechoslovakian Pavilion at Expo '67. The 32 by 20 foot screen was composed of 112 rear-projection cubes containing two slide projectors each. In turn, each slide projector was equipped with a tray of eighty slides that could be changed in half a second. Thus each cube was capable of displaying 160 images in eighty seconds. The entire wall could be one picture, or sections of it could be delayed or speeded as desired. Photo: courtesy of Bergen Motion Picture Service.



The Diapolyceran Screen, Expo '67. Photo: courtesy of Bergen Motion Picture Service.

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audience around one side of it: a series of balconies so everybody's in the front row. The audience would become part of the sphere. The picture comes around as far as you can see, and beneath you too.

"What I would like to see is a theatre with so great an area that you no longer think in terms of a screen: it's the *area* you're projecting on. Your images should come out of this great, completely-surrounding area and hit you in the eye or go off into infinity. So you're no longer working with a flat surface but rather an infinite volume.

Thompson's other major interest is the earphone/eyephone concept similar to the hoodlike training devices used in aircraft and aerospace navigation schools. A *mini-dome* or individual sphere is lowered over the head of the viewer. "You have images that completely fill your field of vision and sound that would fill your entire range of hearing." Thompson also finds in expanded cinema the potential for a new consciousness and life style. "Through formal relationships of images, most carefully planned, you can produce the most powerful kind of communication. With a great sphere you're introducing people into a whole new visual world which would be emotionally, physically, and intellectually overwhelming."

Cerebrum: Intermedia and the Human Sensorium

The technology to produce such environments as Kroitor and Thompson describe has existed for some time; what has not been available is the necessary consciousness. Man has been so busy proving his right to live that he has not learned *how* to live. Thus we exist in an environment almost totally bereft of aesthetic sensibilities; we are conditioned by architecture of the most vulgar design; our entertainment is of the lowest level of conditioned response to formulas; our traditional mode of interpersonal relationships is practically bankrupt of integrity; the economic system forces us to act for "profit" rather than use; there is hypocrisy and violence everywhere. Disneyland is this culture's idea of a sensorium.

Yet the evolution of intermedia, from the primitive shadow show to Wilfred's color organs to the cybernetic phantasmagorias of contemporary world expositions, indicates an increasing human capacity to assimilate and comprehend more complex environmental stimuli. The existence of something like New York's "Cerebrum," therefore, is hardly surprising: it's one of many current phenomena that constitute a pattern-event toward the eupsychia that is implicit in the intermedia experience as a kind of sensory-stimulation laboratory.

Cerebrum is among the first indications of an imminent trend that simultaneously will transform and unite those disparate social experiences characterized by "nightclubs" on the one hand and "art galleries" on the other. Cerebrum is neither. There's nothing for sale at Cerebrum except time. And although certain synthetic events do occur, they are such that one's relative participation determines their effectiveness. So one could say that Cerebrum not only isn't an object, it doesn't even lay claim to an identifiable, marketable experience; that's because Cerebrum (the place) exists in cerebrum (the mind). Fundamentally, one purchases three hours of time in which to practice leisure, decision-making, interpersonal responsibility, body awareness, and sensory perception; Cerebrum's "guides" supply the necessary intermedia environment.

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Sensory-kinetic multimedia experience at Cerebrum in New York. Photo: Ferdinand Boesch.

An evening at Cerebrum follows from Form to Structure to Place. You get out of the cab in a sleazy slum neighborhood and ring a buzzer. The door opens automatically and closes behind you, locking. You find yourself in a small black cubicle about four feet square. A hidden speaker asks your name, and after a few minutes one of the walls opens. You are led to an anteroom where you are asked to remove your shoes. A boy and a girl, obviously nude beneath diaphanous flowing gowns, lead you down a narrow corridor to a large white rectangular space.

This is the Form level: from a dark closet to a larger room, down a narrow hallway to an open space. Next comes the Structural experience: the floor actually is a raised, carpeted platform sectioned into geometrical islands inset with electronic control panels. These

islands are approximately three feet above the real floor, and you are forced to pay close attention to where you step.

The guides lead you to a particular island (there are about ten of them, each accommodating four persons). You are instructed to put on a gown, and are invited to remove beneath it as much of your clothing as you desire. Glancing around, it becomes obvious that nearly everyone is nude beneath his gown, so you strip. The sensation is delicious, especially for men, who are not accustomed to being naked beneath a long silk gown. One is immediately self-conscious, but not embarrassed; one simply becomes fascinated with the feel of one's own body in its silken envelope.

The first half-hour of the three-hour "session" is spent adjusting to the environment, staring at bodies as they pass in silhouette, wondering what to do with yourself, and finally venturing off your island to walk among the other guests, feeling the air on your skin: this is the Place experience. A noticeably eclectic selection of music (from polkas to swing-era ballads, ragas, rock, symphonies) seems to come from nowhere in particular, and a cool passive light show plays ambiently across the walls and ceiling. Eventually, the guides pass around tambourines, gongs, triangles, and flutes, encouraging everyone to play along with the Muzak.

During this time I began to notice what for me was the most interesting aspect of the experience. People began to act out their fantasies, get into their own realities, perform anonymous little psychodramas. One refined-looking, silver-haired, middle-aged gentleman knelt and gazed lovingly at his matronly wife as she danced before him like Scheherazade, palms pressed together over her head, hips swaying in silhouette. It was, perhaps, a fantasy they had never realized in the privacy of their own bedroom. Elsewhere, a beautiful young girl who wouldn't remove her panties was "raped" by her husband, who peeled them off beneath her gown as his friend held her arms. She squealed in mock anger and false modesty, but an hour later could be seen twirling about the room like a ballerina, her gown flying far above her shapely hips.

Thus, for some, Cerebrum becomes an excuse to do and say things they might not otherwise attempt. The two examples I've cited occurred rather anonymously, and probably went unnoticed by most



Cerebrum: "All the senses were stimulated in various subtle ways." Photo: Ferdinand Boesch.

of the guests. The nature of Cerebrum is such that it would be difficult to create an unpleasant scene.

I found the unisex effect of the gowns quite stimulating. At one point male guides came around with mint-flavored menthol ice that they smeared on our lips with their fingertips. "What does it taste like?" they inquired softly, as though not expecting an answer. This intimate contact with a complete stranger in a relatively "public" setting was a challenging experience, particularly for men, who are not as disposed as women to physical intimacies in public. The young men were followed by girls who daubed our foreheads with a similar skin-tingling substance. These sensual encounters had an ethereal, gentle, transcendental effect. One appreciates the delicacy and poise necessary to accomplish them without embarrassment.

Then the guides began collecting guests together in groups of six. They instructed us to form circles and clasp hands in the center, like spokes of a wheel. They squirted hand cream into the tangle of fingers as we closed our eyes and felt our hands melt into others, rubbing and squeezing anonymous flesh. We then lay on our backs, feet touching in the center of the circle, and wiggled our toes against one another as the guide squirted them with the slippery cream. The effect was extraordinarily erotic.

At one point a scented fog was released from beneath the platforms, filling the space with an eerie haze through which one could see ghostly figures moving and dancing. Needles of light from a mirror-globe cut through the fog like electrons in a cloud chamber; it was beautiful. Next a huge parachute was spread out; half of the guests lay on the floor beneath the parachute as the other half stood around its circumference, raising and lowering it to form a suction that lifted gowns, and exposed bodies, but no one cared; we just closed our eyes and enjoyed the sensation, rather like dreaming that one's bed is flying away.

All the senses were stimulated in various subtle ways: the touch and taste of the camphor ice on the lips, the slippery intermingling of hands and feet, the scent of the vapors, the kinetic stimulation of the light show and parachute, the visual alterations in the general level of luminosity that also affected one's perception of forms and distances. Bits of melon and fruit were passed around, as well as a communal mug of Coke. There was no sensation-numbing alcohol.

A kind of hypnotic centering took place when a giant balloon, anchored to an outlet in the center of the floor, began inflating slowly with a loud steady hiss. The balloon was illuminated from a spotlight on the floor beneath it and glowed eerily as the houselights were dimmed. Everyone sat in the lotus position and gazed as the luminescent sphere loomed above our heads. Then it was deflated just as slowly. A simple but effective experience.

At Cerebrum one is voyeur, exhibitionist, and participant. One is both male and female. One is a walking sensorium. Surely we can foresee that not-too-distant day when "nightclubs" will be operated by art dealers who commission artist-guides to create ecological-

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experience places that will resemble Cerebrum in many respects. In other ways, however, the intermedia palaces of the near future will embrace bold new vistas of human experience. "I can envision a world in which people's lives are recorded," says intermedia artist Tom DeWitt, "and a massive amount of material is accumulated, vast libraries, and people who never meet other people but just spend their lives editing audio-visual records of their own existence. When you look at a mixed-media show there's an awful lot of information; it's beyond the comprehension capabilities of most people. But if it were an intermedia show made for an individual whose life was being portrayed, he could relate to it. I can imagine people having traumatic experiences in such an environment and coming to some idea of who they really are." In the pages that follow I hope to demonstrate that intermedia art is but another path in man's ancient search for himself.

Intermedia Theatre

Susan Sontag once defined the "two principal radical positions" in contemporary art as that which recommends the breaking down of distinctions between genres, and that which maintains or upholds those distinctions: on the one hand seeking a "vast behavioral magma or synaesthesia"; on the other hand pursuing "the intensification of what each art distinctively is." She concluded that the two positions are essentially irreconcilable except that "both are invoked to support a perennial modern quest—the quest for the definitive art form."¹

Surely the definitive art form is not anti-environmental, as art must be when viewed in terms of genres: to isolate a "subject" from its environs by giving it a "form" that is art denies the natural synaesthetic habitat of that subject, physical or metaphysical, icon or idea. In the progression of art history through Form, Structure, and Place, the idea of art as anti-environment has long been surpassed. This is not to say that any activity that seeks to discover the essence of a medium is somehow disreputable; on the contrary, the exclusive properties of a given medium are always brought into sharper focus when juxtaposed with those of another.

Thus, in intermedia theatre, the traditional distinctions between what is genuinely "theatrical" as opposed to what is purely "cinematic" are no longer of concern. Although intermedia theatre draws individually from theatre and cinema, in the final analysis it is neither. Whatever divisions may exist between the two media are not necessarily "bridged," but rather are orchestrated as harmonic opposites in an overall synaesthetic experience. Intermedia theatre is not a "play" or a "movie"; and although it contains elements of both, even those elements are not representative of the respective traditional genres: the film experience, for example, is not necessarily a projection of light and shadow on a screen at the end of a room, nor is the theatrical experience contained on a proscenium stage, or even dependent upon "actors" playing to an "audience."

¹ Susan Sontag, "Film and Theatre," *Tulane Drama Review* (Fall, 1966), pp. 24-37.

Carolee Schneemann: Kinetic Theatre

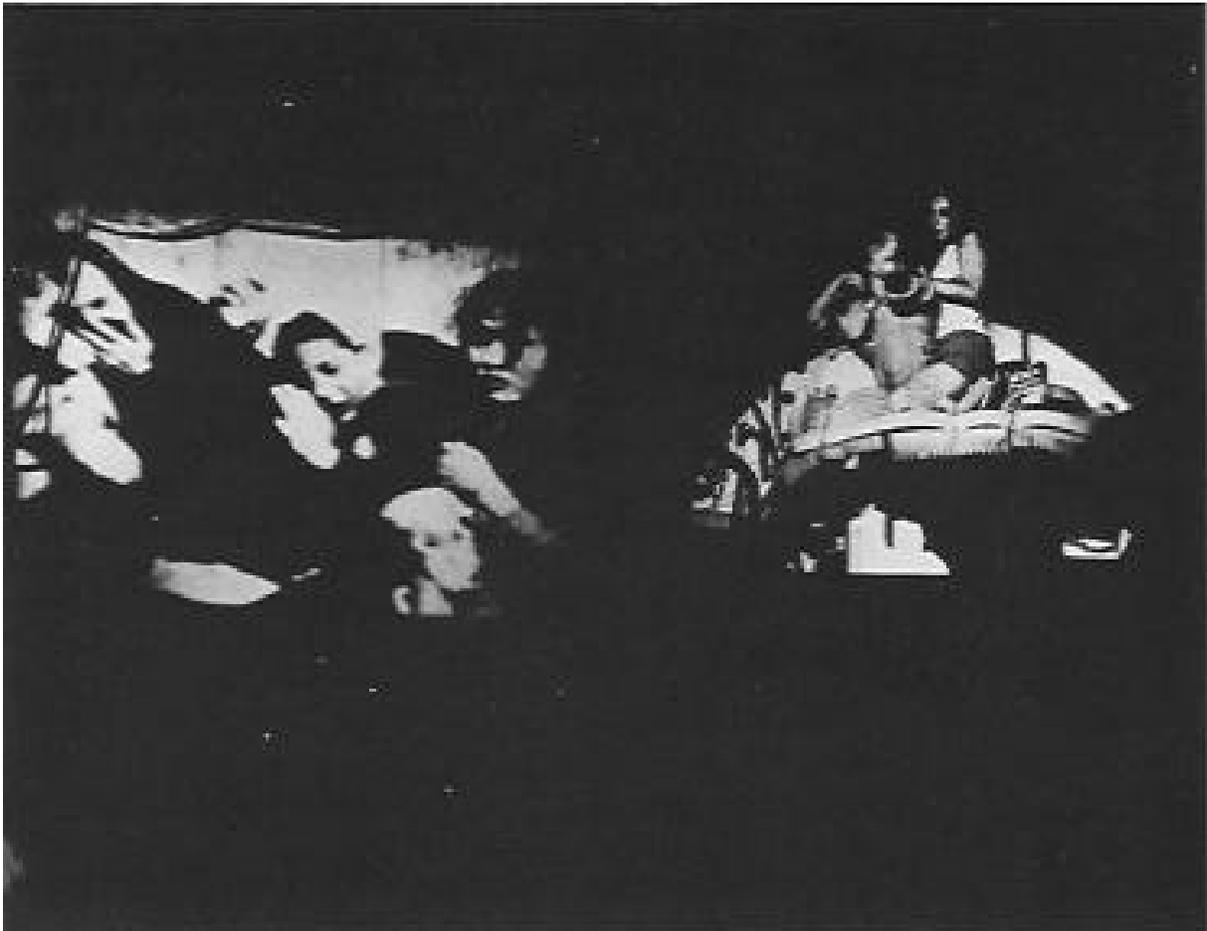
Pioneer intermedia artist Carolee Schneemann describes Kinetic Theatre as "my particular development of the Happening, which admits literal dimensionality and varied media in radical juxtaposition." She works with untrained personnel and various materials and media to realize images that range from the banal to the fantastic, images which, in her words, "dislocate, disassociate, compound, and engage our senses to allow our senses to expand into primary feelings, as well as the sensitive relatedness among persons and things." Through these methods she seeks "an immediate, sensuous environment on which a shifting scale of tactile, plastic, physical encounters can be realized. The nature of these encounters exposes and frees us from a range of aesthetic and cultural conventions."

Since 1956 Miss Schneemann has continually redefined the meaning of theatre. Though New York is her home, she has staged radical intermedia events throughout the United States, Canada, and Europe. Her best-known works include *Snows*, presented as part of New York's Angry Arts Festival in 1967; *Night Crawlers*, staged at Expo '67 in Montreal; *Illinois Central* (1968); and the film *Fuses*. I asked what directions she will follow in future intermedia work.

CAROLEE: I'm moving more into technology and electronics. My long-range project is completely activated by the spectators. I'll sensitize the audience through a performance situation in which detailed film images are set off by the audience as they move into the performance environment. They'll activate overlapping timed projectors. If they want a film to be shown again they'll have to figure out what they did to make it start in the first place. These films will show detailed aspects of performance situations: touching, handling, moving. Then as the participants move in other directions the actual materials shown in the films will be introduced. They'll fall from the ceiling or be tossed out of boxes.

GENE: I take it you find film/actuality interactions effective in involving the audience.

CAROLEE: *Night Crawlers*, which I did at Expo '67, was very successful in this manner. I juxtaposed my Vietnam film with a



Carolee Schneemann: *Night Crawlers*. Expo '67. Live performers (*right*) contrasted with film projection.

little Volkswagen that drove in front of the film and stopped. It was stuffed with foam rubber. My partner and I performed a complex of physical handling on top of, and inside the VW while another person was pulling all the foam out. It was a very intimate and humorous event in front of this horrifying Vietnam film. Before it began, a girl and I went through the audience and stepped on their shoulders and knees and gave each person candy and cake. We spoke to them. They got very turned on by the whole thing. At the end we brought them into the performance area and played lights and sound around them. They found elements of the environment that they could start to tear down. They began rather hesitantly, but

after they ripped a couple of layers of paper there'd be a message greeting them, saying proceed, or directing them to paint cans. The point seems to be to let people work out of impulses that are blocked. If the situation is obvious they tend to be destructive. They're working in daily life with outmoded kinds of repressions and resistances. They tend to get violent. So we try to open up an empathy between them and what we're doing that they're not consciously anticipating.

GENE: Do you always use film in your theatre pieces?

CAROLEE: Yes, I tend always to use it in some aspect of an environmental performance situation, primarily because of the intensification of information it gives, which may just be sensory information. And I use it to transform the environment. I tend to use film very formally. Every element that goes into the environment I'm working with is very carefully shaped in terms of scale, time duration, what's going on in juxtaposition to a film. In *Illinois Central* there was a three hundred and sixty-degree visual environment that was changing and shifting all the time, composed of films and slides. And I like using slides against films because I can start and stop, overlap, black out, manipulate. I've been working with portable projectors so that the image can be shifted in space.

GENE: Do you work with body projections?

CAROLEE: Yes, and I find it always satisfying. I do a lot of performing just in the light of film projectors. So that it's a very compacted image and there are no peripheral distractions. It becomes central to the environment without your really having the sense of film, because the bodies or forms of people are quite embedded in it.

GENE: Do you make your own films or work with found images?

CAROLEE: I animated the Vietnam film, shot it from stills with various lenses so that it seems as if it's really moving. The images in that film were central to the development of *Snows*. My *Snows* movie begins with a very beautiful 1947 newsreel, a snowstorm, a fall of confetti during a parade, and ends with a car exploding and bursting into flames, then the Pope blessing people. One little horrific element after another: volcanic eruptions, ships going down... For my film *Viet Flakes* I shot a still of a Nationalist soldier shooting a Communist worker. It's in three sections: he raises his

gun, he leans forward, and the victim is lying there with a dark spot under his head. Then I got two newsreels of winter sports in Zurich during World War II while all hell was breaking loose everywhere else in the world. Then I made a little 8mm. film that played on our bodies, showed a New York blizzard and a car driving through the city. The projectors were either carried by hand or mounted on revolving stools.

GENE: How did you work with film for *Illinois Central*?

CAROLEE: I went out in advance and shot footage of empty horizons. Very slow, attenuated, linear footage. Then I borrowed about five hundred slides of the same landscape, this absence of form. And I used the slides stretched out against the film; while the film would have a certain kind of horizon line, I'd have six duplications of one slide horizon feeding into the film from all around the room. And then as the film shifted, slide images would shift. It wasn't decorative. I use films and slides as compacted metaphors. It compounds the basic range of emotive material. It concretizes the event, girds it in. While the live physical movements are ambiguous and emotional, the films lend a banal insistence.

GENE: How do you think of your work in terms of their objective and subjective aspects, actuality versus illusion?

CAROLEE: I've always thought that I'm creating a sensory arena, and what you describe as kinetic empathy is very basic to the process. Because the information, in terms of what we're able to feel, how much the audience is able to open up, be moved and touched—it's all completely of the moment. There's this strange sort of fulcrum of the individual sitting there without narrative or literary preparation to help him follow the action. It's all involved in sensory receptivity. And I'm bombarding them, I'm giving them more than they can possibly assimilate at any one point. Unlike painting, which used to be my medium, where you could take a great deal of time. And the thing is, with a static element, the audience is actually being more active. You choose the time duration and manner in which you experience the object. But my theatre pieces call forth a whole other range of response areas. At the end of *Snows* many people in the audience are crying, and they don't really know why, because it all happens with an incredible immediate speed and it's overwhelming.

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GENE: Some critics feel that many of the arts explore sensory awareness or perception well enough, but that one doesn't come away with a knowledge of a subject having been learned.

CAROLEE: I know that criticism, but it doesn't bother me because it's not a real criticism anymore. What I'm going more toward is not merely a sensory or perceptual activation of the audience but an actual physical involvement. There no longer can even be the situation of performers who prompt or provoke the audience; we must deal directly with the audience itself as performers. As much as we so-called actors need to be performers, so they need to become performers, they need to enact that situation themselves. They must give over a kind of trust in the situation and go into it. I approach the audience with a great deal of care and tenderness, never being physically aggressive. The media information may be aggressive, but it's going to stimulate them in ways that I have to be responsible for. So in terms of what that media might provoke, I have to oversee it.

GENE: So in a sense one goes to the theatre for completely different reasons than one used to; I hesitate to use the term "therapy," but it seems to approximate something like that.

CAROLEE: We go to the theatre in search of inner realities because of the bankruptcy of the myths and conventions we're used to dealing with in everyday life.

GENE: Perhaps in the near future, the whole process of living will be in this active seeking out of experiences.

CAROLEE: Right. What people really want is tactile confirmation, to be in touch with their physicality, to be able to communicate, and to grow, to touch one another and be touched. To get away from the somnambulism of contemporary life. We get all this information and there's absolutely no way to react. You're reading some horror in your newspaper while eating your doughnut. And if you were a natural animal you'd at least scream for fifteen minutes or chop the sofa into bits—assuming that you can't go and change the thing that the media tells you is an outrage. So we're trapped with all these fears of real impotence.

GENE: What other kinds of environmental projections have you done?

CAROLEE: Smoke, balloons, and buildings. In Montreal I did an outdoor event in which we carried the projectors and moved films across buildings at night, the images breaking into planes and fragments. The basic condition for my work is that whenever I find out how something works, what makes it go, say in regard to technology or any kind of element—even a human being—then I want to change it. As soon as I saw what a frame was for film I wanted to break it. I didn't want to be stuck with that same rectangle.

Milton Cohen: Space Theatre

Milton Cohen, primary creative force behind the famous ONCE group of Ann Arbor, Michigan, has, since 1958, been developing what he calls "Space Theatre," a highly original and effective environmental projection system for intermedia events. In fact Space Theatre is more concept than system, for Cohen continually modifies the hardware and architectural parameters of the theatre he has constructed in his studio. Yet the motive remains, as always, "to free film from its flat and frontal orientation and to present it within an ambience of total space."

The core of Space Theatre is a rotating assembly of mirrors and prisms adjustably mounted to a flywheel, around which is arranged a battery of light, film, and slide projectors. The movement of the mirror/prism flywheel assembly determines image trajectories as the projections are scattered throughout the performance environment. In the past, Cohen has positioned rectangular and triangular panels about the space, to serve both as screens and as strategic points for image interaction with live performers. Often these panels have also been mobile—revolving, folding, or tilting—operated mechanically or by hand in a manner responsive to the image being projected.

Cohen's most recent presentation was *Centers: A Ritual of Alignments*. Here the projection surface was a translucent circular core from which eight triangular screens radiated. Behind each screen was a photoelectric cell that activated sound and strobe-light events at various positions in the performance area. (Cohen often employs the amplified sound of the projection equipment itself as the aural complement of the imagery.) Behind the core, also described as the "target" area, was a slide projector.

Film imagery was basic to the performance. Cohen adapted pro-



Carolee Schneemann: *Illinois Central*. 1968. "I've always thought that I'm creating a sensory arena... we must deal directly with the audience itself as performers." Photo: Peter Holbrook.



Centers: A Ritual of Alignments, as performed by Milton Cohen in his Space Theatre. 1969.

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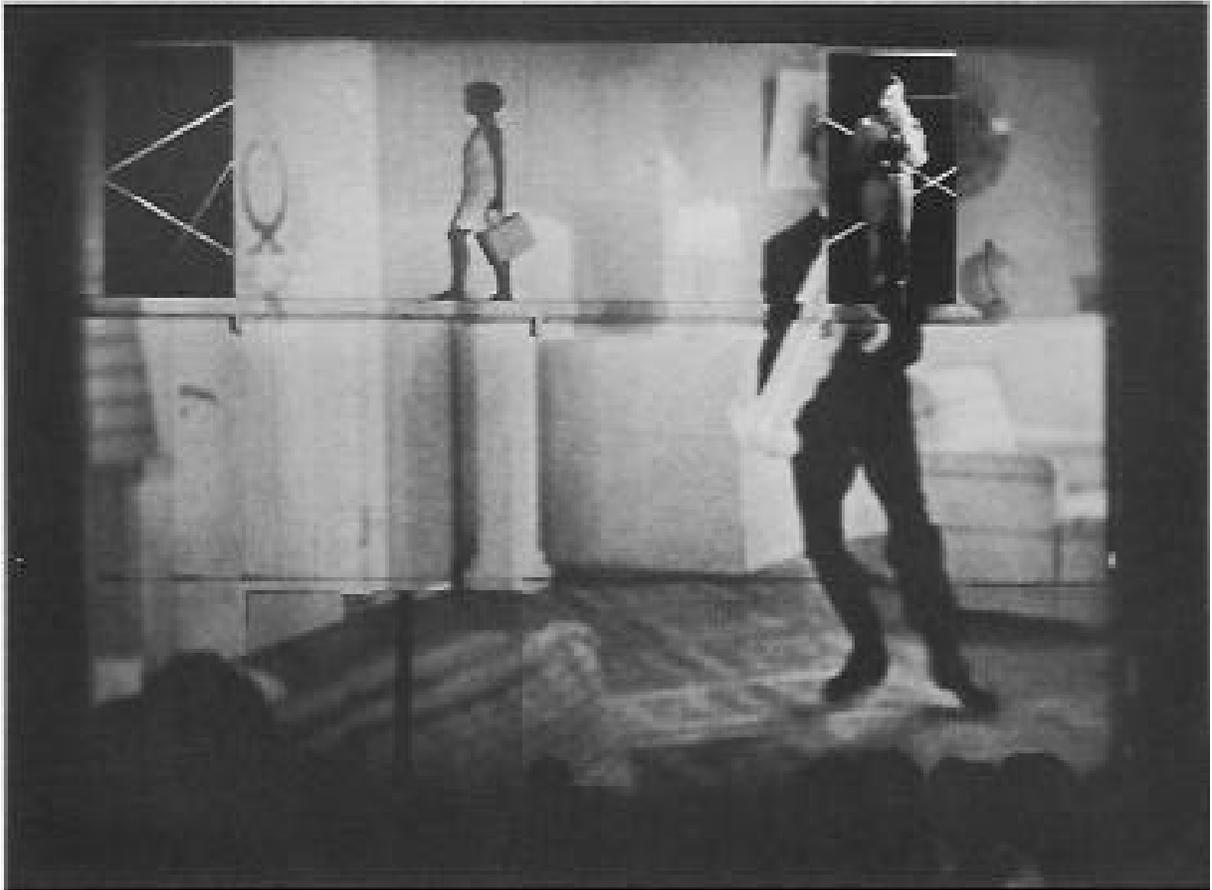
jectors to handle twelve-foot film loops projected sequentially on the fanlike screens, making one round every twenty seconds. Simultaneously various geometrical target patterns were rear-projected onto the core. The audience is seated on revolving stools in the twenty-foot area between the projection system and the screen. Their attention is polarized between the gyrating film and the free-floating slide imagery registering on walls and screens that define the total enclosure.

The multi-channeled sound is electronic, instrumental, and vocal, and moves in complex trajectories from speaker to speaker. The effect, according to Cohen, "is one of sound in flight; sound seeking target." This theme of seeking out the target is carried over into the visuals through the manipulation of the projection console in a discrete sequence of maneuvers that search out the center. "When and if this centering is won," Cohen explains, "the performance may proceed to the next film loop. But also ways must be discovered for other performers (live dance, live music, etc.) as well as the audience to contribute to the audiocentric and luminocentric probes. Ultimately there must be a common voyage for all to that identifying place which describes at once the center and the whole."

The ONCE group has explored structures other than Space Theatre. Perhaps the best known American intermedia theatre event was their *Unmarked Interchange* (1965), in which live performers interacted outrageously with the Fred Astaire-Ginger Rogers film *Top Hat* projected on a huge screen inset with movable panels, louvers, and large drawer-like sections. While a couple dined by candlelight at a table in one corner of the screen, a man read into a microphone from the pornographic novel, *Story of O*, at the opposite end of the projection surface; periodically a girl walked across a catwalk in the center of the screen and hurled custard pies in his face. In another opening, a man played a piano. And over all of this Fred and Ginger danced their way through 1930's Hollywood romantic escapism.

John Cage and Ronald Nameth: *HPSCHD*

Computer-composed and computer-generated music programmed by John Cage and Lejaren Hiller during 1967-69 was premiered in a spectacular five-hour intermedia event called *HPSCHD* (computer



ONCE Group: *Unmarked Interchange*. 1965.
Live performers interact with projection of
Top Hat, starring Fred Astaire, Ginger Rogers.
Photo: Peter Moore.

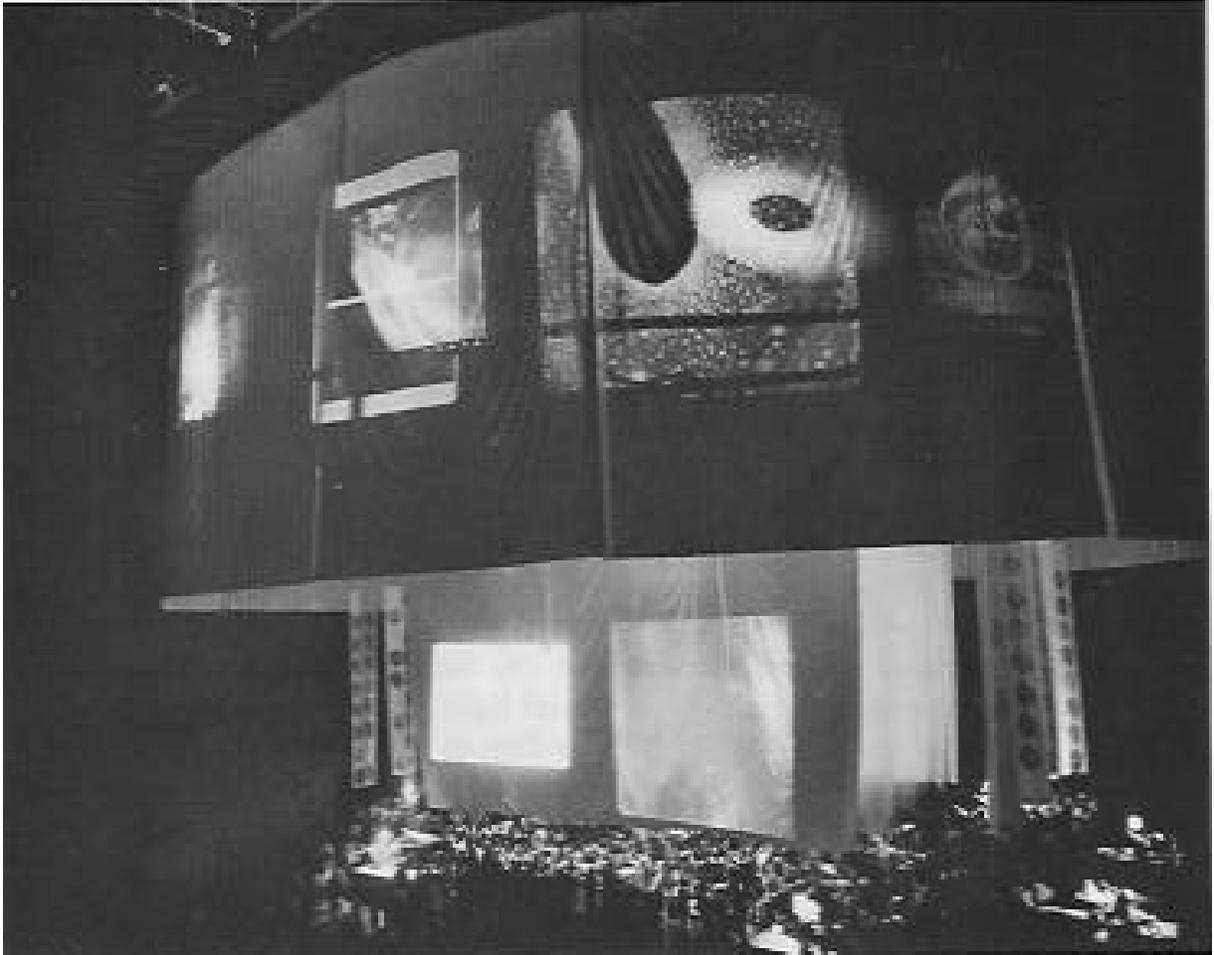
abbreviation for Harpsichord) at the University of Illinois in May, 1969. Computer-written music consisted of twenty-minute solos for one to seven amplified harpsichords, based on Mozart's whimsical *Dice Game* music (K. Anh. C 30.01), one of the earliest examples of the chance operations that inform Cage's work. Computer-generated tapes were played through a system of one to fifty-two loudspeakers, each with its own tape deck and amplifier, in a circle surrounding the audience. Cage stipulated that the compositions were to be used "in whole or in part, in any combination with or without interruptions, to make an indeterminate concert of any agreed-upon length."

The university's 16,000-seat Assembly Hall in which the event was staged is an architectural analogue of the planetary system: con-

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Milton Cohen's Space Theatre, Ann Arbor, Michigan. 1969. Sight and sound move in complex trajectories through a maze of shifting, revolving, faceted surfaces, seeking the target.



John Cage and Ronald Nameth: *HPSCHD*.
1969. Assembly Hall, University of Illinois,
Champaign-Urbana. Fifty-two loudspeakers,
seven amplified harpsichords, 8,000 slides,
100 films. Photo: courtesy of Ronald Nameth.

centric circular promenades and long radial aisles stretching from the central arena to the eaves of the domed ceiling. Each of the forty-eight huge windows, which surround the outside of the building, was covered with opaque polyethylene upon which slides and films were projected: thus people blocks away could see the entire structure glowing and pulsating like some mammoth magic lantern.

Over the central arena hung eleven opaque polyethylene screens, each one hundred feet wide and spaced about two feet apart. Enclosing this was a ring of screens hanging one hundred and twenty-five feet down from the catwalk near the zenith of the dome. Film-

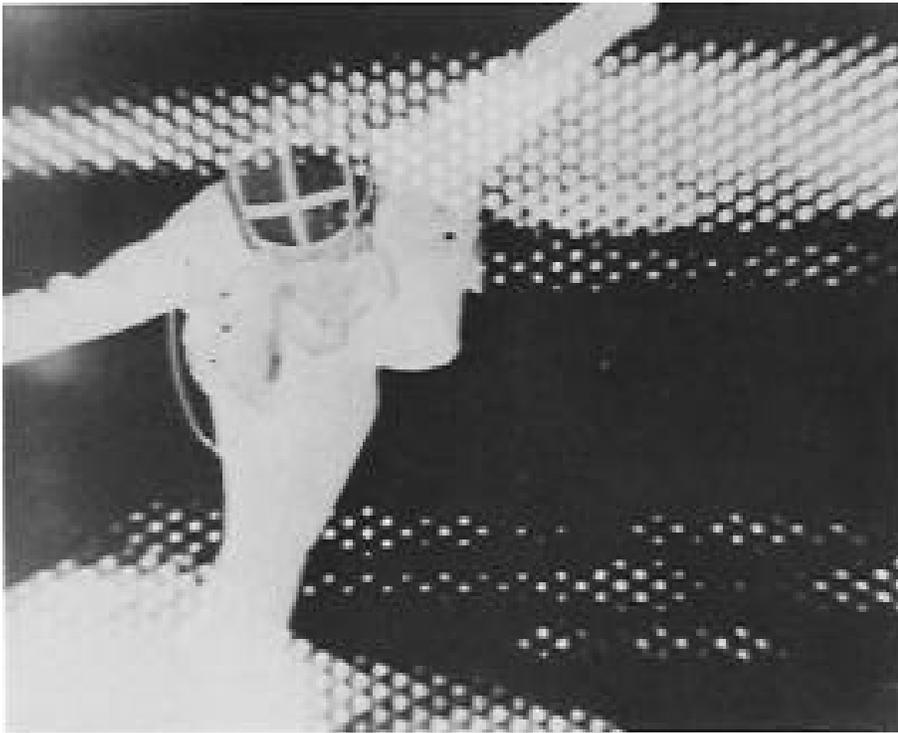
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maker and intermedia artist Ronald Nameth programmed more than eight thousand slides and one hundred films to be projected simultaneously on these surfaces in a theme following the history of man's awareness of the cosmos. "The visual material explored the macrocosm of space," Nameth explained, "while the music delved deep into the microcosmic world of the computer and its minute tonal separations. We began the succession of images with prehistoric cave drawings, man's earliest ideas of the universe, and proceeded through ancient astronomy to the present, including NASA movies of space walks. All the images were concerned with qualities of space, such as Méliès' *Trip to the Moon* and the computer films of the Whitney family. The people who participated in *HPSCHD* filled in the space between sound and image."

Seven amplified harpsichords flanked by old-fashioned floor lamps stood on draped platforms on the floor of the central arena beneath the galaxy of polyethylene and light. In addition to playing his own solo, each harpsichordist was free to play any of the others. Each tape composition, played through loudspeakers circling the hall in the last row of seats near the ceiling, used a different division of the octave, producing scales of from five to fifty-six steps. Only twice during the five-hour performance were all channels operating simultaneously; these intervals were stipulated by Cage.

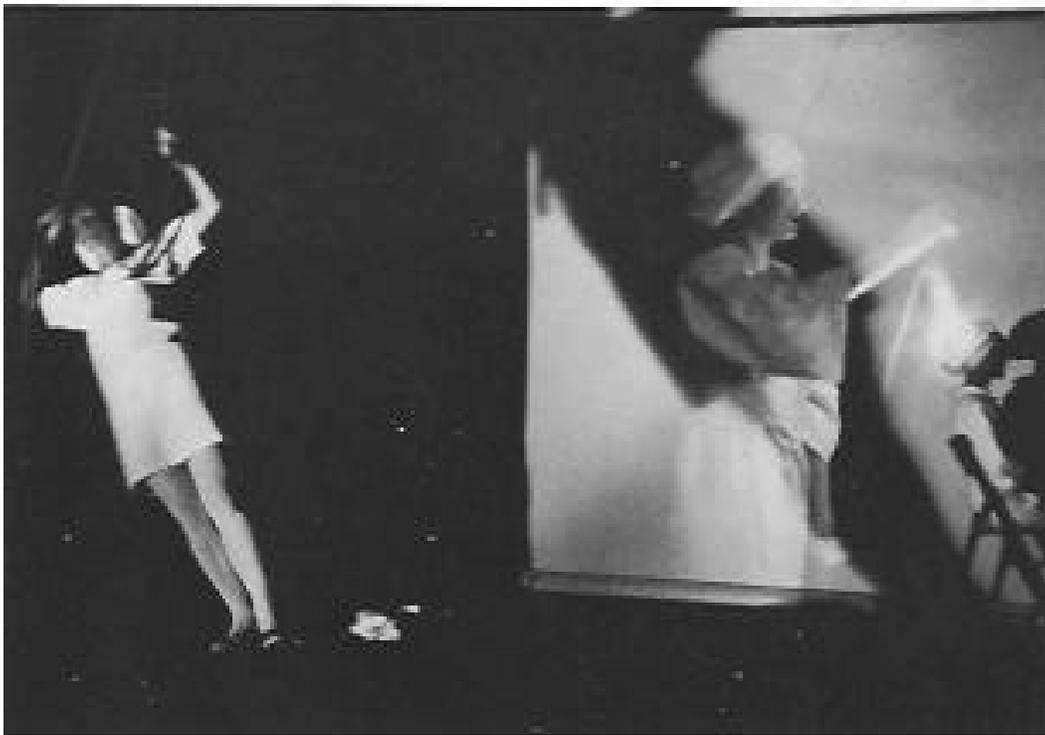
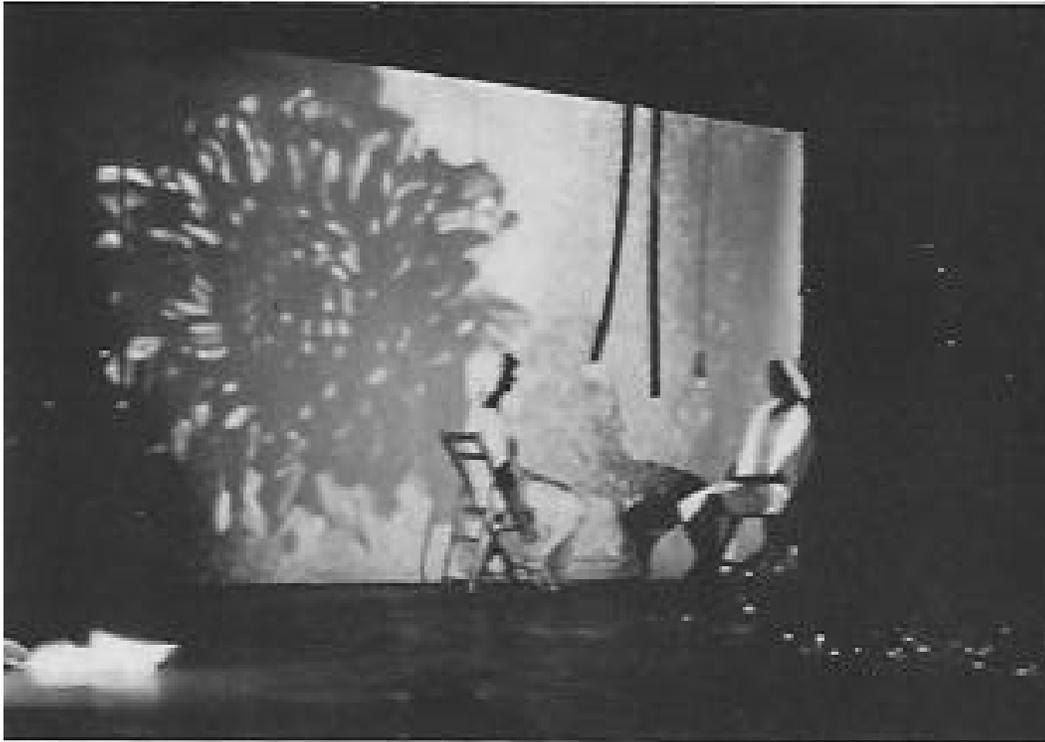
Nameth has collaborated in several intermedia performances in addition to making his own computer films and videographic films, as well as conventional cinema such as *Andy Warhol's Exploding Plastic Inevitable*. In 1967 he worked with Cage in the preparation of *Musicircus*, an eight-hour marathon of sight and sound involving nearly three thousand persons—musicians, musical groups, orchestras, and composers in addition to a participating "audience"—all making music together.

In 1968-69 Nameth worked with Salvatore Martirano and Michael Holloway in a music/theatre/film presentation titled *L.'s G.A.* (Lincoln's Gettysburg Address), which traveled throughout the United States and Japan. Described as a mixed-media event "for gas-masked politico, helium bomb, three 16mm. movie projectors, and two-channel tape," *L.'s G.A.* was simultaneously a showcase for Martirano's electronic tape compositions, Nameth's multiple-projection cinema, and Holloway's poetry. Nameth employed video imag-



Two scenes from Ronald Nameth's triple-projection film *As the World Turns* for intermedia presentation *L's G.A.* 1968-69.

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Two scenes from Robert Whitman's *Prune Flat*. 1965. Performers' actions were synchronized with their film versions. Photos: Peter Moore.

ery for his cinematic triptych *As the World Turns*, which he described as "the visual counterpart of Martirano's music." Depending on the physical limitations of the performance space, Nameth's film was projected in the form of two smaller images side by side within a larger image, all three images adjacent to one another, or all three superimposed over one another.

Robert Whitman: Real and Actual Images

The higher ordering principle of intermedia, or what might be called "filmstage," is the simultaneous contrasting of an actual performance with its "real" projected image, so that the live performer interacts with his movie self. The New York artist Robert Whitman developed this technique in several variations during the period 1960-67, after which he abandoned film/theatre compositions for experiments of a more conceptual nature.

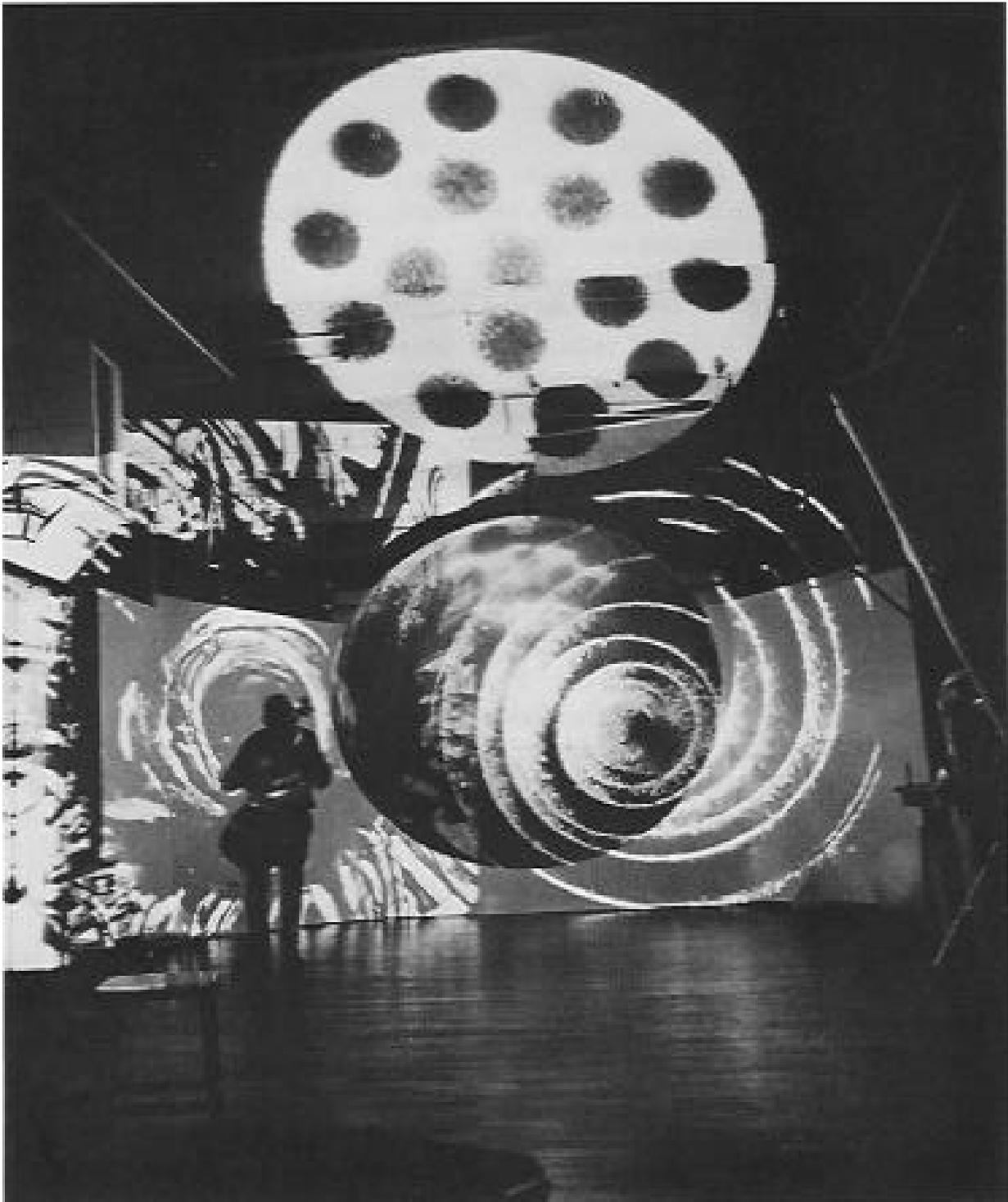
In *The American Moon* (1960) the audience viewed a central performance space from six tunnel-like mini-theatres whose openings were periodically blocked by plastic-and-paper screens on which films were projected. Persons in each tunnel could see through their screens to the flickering images on the screen of the opposite tunnel. Thus Whitman engaged cubic space, filmic space, real and projected images.

In his most famous work, *Prune Flat* (1965), Whitman utilized a conventional proscenium stage with a large movie screen as backdrop. Two girls performed various movements and gestures in person, while their filmed images performed the same action, and some different ones, on the screen. A third girl was dressed in a long white gown on which was projected a movie of herself removing her clothes. The girl's physical actions were synchronized with the film being projected on her: she pretended to "throw" her skirt into the wings as the filmed image did so, etc. Finally a nude image of the girl was projected on her fully-clothed figure.

Aldo Tambellini: Electromedia Theatre

A pioneer in intermedia techniques, Aldo Tambellini has worked with multiple projections in theatrical contexts since 1963, always striving to cast off conventional forms, using space, light, and sound environmentally. In the spring of 1967 he founded The Black Gate,

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Aldo Tambellini: *Black Zero*. 1965. Shown at the artist's Black Gate Electromedia Theatre in New York.

New York's first theatre devoted exclusively to what Tambellini calls "electromedia" environments.

His archetype, fully realized in *Black Zero* (1965), is a maelstrom of audio-visual events from which slowly evolves a centering or zeroing in on a primal image, represented in *Black Zero* by a giant black balloon that appears from nothing, expands, and finally explodes with a simultaneous crescendo of light and sound. Literally hundreds of hand-painted films and slides are used, each one a variation on the *Black Zero* theme. In addition to electronic-tape compositions, the piece often is performed in conjunction with a live recital of amplified cello music.

In *Moon-Dial* (1966) he collaborated with dancer Beverly Schmidt in a mixture of the human form with electronic imagery in slides, films, and sounds. With Otto Piene, he presented *Black Gate Cologne* at WDR-TV in Germany in 1968, which combined a closed-circuit teledynamic environment with multi-channel sound and multiple-projection films and slides as the participating audience interacted with Piene's polyethylene tubing. Another version of this piece was conducted along the banks of the Rhine in Dusseldorf, with projections on a mile-long section of tubing.

Wolf Vostell: De-Collage

Although he works largely with television, both as object and information, the German intermedia artist Wolf Vostell is most significant for the way in which he incorporates his video experiments into environmental contexts. Actually, his videotronic manipulations are no more sophisticated than the distortion of broadcast programs using controls available on any common TV set. But this is precisely the point of his work: rendering the environment visible as "art" by manipulating elements inherent in that environment.

Since 1954 Vostell has been engaged in what he calls "de-collage" art, or decomposition art. This is not to be confused with destruction art, fashionable during approximately the same period, for Vostell destroys nothing: he creates Happenings or environmental theatre in which already broken, destroyed, damaged, or otherwise derelict elements of the environment are the central subjects. Beginning in 1964 he made the first of several versions of one film titled *The Sun in Your Head*, described as "a movie of de-collaged television pro-

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Aldo Tambellini and Otto Piene: *Black Gate Cologne*. 1968. Tambellini's electromedia environment combined with Piene's helium-inflated polyethylene tubing at WDR-TV in Cologne, West Germany. Photos: Hein Engelskirchen.



Wolf Vostell: *Electronic Happening Room*.
1968. One of Vostell's de-collaged TV sets in
a multiple-projection intermedia environ-
ment designed to generate an awareness
of man's relationship to technology.
Photo: Rainer Wick.

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grams combined with occurrences for press photographers and audience."

Basically, Vostell seeks in all his work to involve the audience objectively in the environment that constitutes its life. He seeks to break the passivity into which most retreat like sleepwalkers, forcing an awareness of one's relation to the video and urban environment. He sometimes describes his work as a form of social criticism employing elements of Dada and Theatre of the Absurd.

In *Notstandbordstein* (1969), the streets, sidewalks, and buildings of Munich became the "screen" on which a film was projected from a moving automobile. Vostell's *Electronic Happening Room* (1968) was an environmental attempt to confront the participant with all the technological elements common to his everyday life, from telephones to Xerox machines to juke boxes. As in most of his work, complex multiple-projections of films and slides were combined with sound collages taken from the natural environment. In New York, in 1963, he exhibited a wall of six blurred (de-collaged) television sets. In *21 Projectors* (1967) the audience was surrounded with a staccato barrage of multiple film and slide projections in complex split-second patterns designed to reveal the surrealism of life in the media-saturated 1960's. He describes his archetypal work as one in which "events on the screen and the actions of the audience merge: life becomes a labyrinth."

Multiple-Projection Environments

In real-time multiple-projection, cinema becomes a performing art: the phenomenon of image-projection itself becomes the "subject" of the performance and in a very real sense the medium is the message. But multiple-projection lumia art is more significant as a paradigm for an entirely different kind of audio-visual experience, a tribal language that expresses not ideas but a collective group consciousness. It's obviously the beginning of what Stan VanDerBeek proposed in the "image library, newsreel of dreams, culture intercom."

"The purpose and effect of such image flow," wrote VanDerBeek in his 1965 *Manifesto*, "is both to deal with logical understanding and to penetrate to unconscious levels, to reach for the emotional denominator of all men, the nonverbal basis of human life." In the following pages we'll discuss multiple-projection environments on a level that might best be described as handicraft, with the possible exception of the Vortex Concerts; yet it's clear that the lumia performance is trending toward levels of cybernetic control far beyond the capabilities of a few individuals, no matter how sophisticated their equipment. Significantly, certain members of the now-defunct USCO group have abandoned the physical handicraft of multiple-projection to develop hardware and software for automated lumia display systems. It's the first stage in a pattern-event toward the kind of transnational communication that VanDerBeek holds essential for the success of global man: "Such centers around the world will have artists in residence to [program] the material for dialogues with other centers at a visual velocity of 186,000 miles per second."

Moreover, lumia art constitutes the promise of an evolving design science integrated architecturally into the fabric of daily life: certainly the true "city of light" has yet to be realized. Recent trends in the application of advanced technology to what might be called "functional aesthetics" indicate a transformation in urban design, the gradual convergence of functionality and beauty, the mundane and the mysterious.



Henry Jacobs (*left*) and Jordan Belson at Morrison Planetarium in San Francisco, California, for Vortex Concerts.

The Vortex Concerts

The legendary Vortex Concerts conducted by Henry Jacobs and Jordan Belson at Morrison Planetarium in San Francisco's Golden Gate Park from 1957 to 1960 were quintessential examples of lumia art integrated with sound in an intermedia environment. By present standards one could not ask for a more perfect setting. "Simply being in that dome was a holy experience," said Belson. "The entire theatre was like an exquisite instrument." And Jacobs recalls: "It was such an absurdly perfect situation that we just stopped altogether after we left the planetarium; when you begin with the ultimate there's nowhere else to go."

Vortex began in May, 1957, as a series of experimental and ethnic music concerts from tapes owned by Jacobs, a poet and composer of electronic music. Within a few weeks, however, he was joined by

his friend Belson, and Vortex became an experiment in visual and acoustical space. The sixty-foot dome was surrounded at its perimeter by thirty-six loudspeakers clustered in equally-spaced stations of three speakers each. There were two large bass speakers on either side and one at the zenith of the dome. Speakers were installed in the center of the room, bringing the total close to fifty sound sources. "The acoustics were very unusual," Belson remarked. "Very hushed, and you could hear any sound no matter how far away, as though it were right behind you, because sound carried over the dome."

The planetarium engineering staff installed a substantial amount of equipment especially for Vortex, including an audio keyboard with controls for addressing individual speakers or spinning sounds rotationally about the room—thus the title of Vortex. In addition, Belson supervised the installation of special interference-pattern projectors that were added to the hundreds of projection devices already assembled. "One of my greatest pleasures," said Belson, "was working with the star machine at a point when the entire dome was bathed in a kind of deep red. As the color began to fade away, there was a point when it overlapped with this beautiful starry sky; it was a breathtaking and dramatic moment.

"We could tint the space any color we wanted to. Just being able to control the darkness was very important. We could get it down to jet black, and then take it down another twenty-five degrees lower than that, so you really got that sinking-in feeling. Also we experimented with projecting images that had no motion-picture frame lines; we masked and filtered the light, and used images that didn't touch the frame lines. It had an uncanny effect: not only was the image free of the frame, but free of space somehow. It just hung there three-dimensionally because there was no frame of reference. I used films—Hy Hirsh's oscilloscope films, some images James Whitney was working on for *Yantra*, and some things which later went into *Allures*—plus stobes, star projectors, rotational sky projectors, kaleidoscope projectors, and four special dome-projectors for interference patterns. We were able to project images over the entire dome, so that things would come pouring down from the center, sliding along the walls. At times the whole place would seem to reel."

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Planetarium projector shown equipped with two interference-pattern projectors (*top right*) for Vortex Concerts.

Sound-to-image relationships amounted to counterpoint rather than what Jacobs calls "Mickey Mouse synchronization." Vortex did not simply project sound into space, but employed dimensionality, direction, aural perspective, and speed of movement as musical resources. "Jordan controlled the performance with parameters of the time an image would begin, the amount of brightness, speed of rotation, and speed of enlargement. I would control the loudness of the sound, the equalization of the sound, and the spatiality of the sound." Music ranged from Stockhausen, Berio, and Ussachevsky to Balinese and Afro-Cuban polyrhythms, set against the geometrical imagery characterized by *Allures*. Jacobs and Belson conducted approximately one-hundred Vortex concerts, including two weeks at the 1958 Brussels World's Fair. In 1960 the planetarium withdrew its support and Vortex ended without ever realizing its full potential.

Jud Yalkut: *Dream Reel*

Jud Yalkut has collaborated in dozens of intermedia performances throughout the United States since 1965, when he became resident filmmaker for USCO at their commune in Garnerville, New York. As filmmaker first and intermedia artist second, Yalkut displays a sense of control and orchestration that is the result of working closely with superimpositions within the film frame. Thus in the superimpositions of multiple-projection environments he is able to control not only the spatial and temporal dimensions of a performance, but the graphic composition and integrity of the images as well. The result is a "film performance" in the fullest sense.

In the spring of 1969 Yalkut joined with Yukihsa Isobe to present *Dream Reel*, a mixed-media performance in Isobe's "Floating Theatre"—a parachute canopy thirty-two to fifty feet in diameter anchored by nylon lines to the floor of the performance area. The Floating Theatre is elevated above and surrounds the audience, using air-flow principles and centrally located fans. In effect, it is a portable hemispheric projection theatre utilizing both front and rear multiple-projection techniques.

Dream Reel is divided into three sections: *Paikpieces*, *Festival Mix*, and *Mixmanifestations*. *Paikpieces* is an environmental tribute to Nam June Paik, incorporating the video-film collaborations between Yalkut and Paik discussed earlier. Performance time is approximate-

ly fifteen minutes, set against the tape composition *Mano-Dharma No. 8* by Takehisa Kosugi (1967) for two RF oscillators and one receiver. Equipment involves four to five 16mm. projectors including one with sound on film, four carousel slide projectors, and a stereo tape system. The contrast of Paik's electronic imagery with the airy buoyance of the silky enclosure produces an ethereal, evanescent atmosphere.

Festival Mix is a multiple-projection interpretation of the 1968 University of Cincinnati Spring Arts Festival, originally presented as an eleven-channel, multi-media "feedback" mix as the final performance of that ten-day festival. In *Dream Reel* it involves three 16mm. projectors, four carousel slide projectors, and a four-track stereo tape system on which is played *Festival Mix Tape* by Andy Joseph and Jeni Engel. Sounds and images include those of Peter Kubelka, Charles Lloyd, Bruce Baillie, Nam June Paik, Charlotte Moorman, Ken Jacobs, Hermann Nitsch's Orgy-Mystery Theatre, Paul Tully, The Fugs, Jonas Mekas, and the MC-5. "I was unnerved and numb from the tremendous impact this had on my senses," one person commented after the performance.

Mixmanifestations, the most complex section of *Dream Reel*, is described by Yalkut as "a nonverbal communion and celebration for all channels within a totally surrounding environmental performance." Visual elements include an exploding hydrogen bomb, the Living Theatre, the Jefferson Airplane, the Grateful Dead, Yayoi Kusama (from Yalkut's film *Self Obliteration*), and various be-ins and peace marches. These are blended and juxtaposed with abstract meditational motifs culminating in a centralizing mandalic experience utilizing both visual and aural loop techniques for the alternating pulse and phase-out of simultaneous temporal interference fields. The twenty-minute performance includes four to five 16mm. projectors, two 8mm. projectors, four carousel slide projectors, and two four-track stereo tape systems for the simultaneous playback of tapes and tape-loop cartridges.

The Single Wing Turquoise Bird

The Los Angeles group Single Wing Turquoise Bird came out of the environmental rock concert and light show genre that characterized the pop scene of the mid-sixties. Initially they staged huge



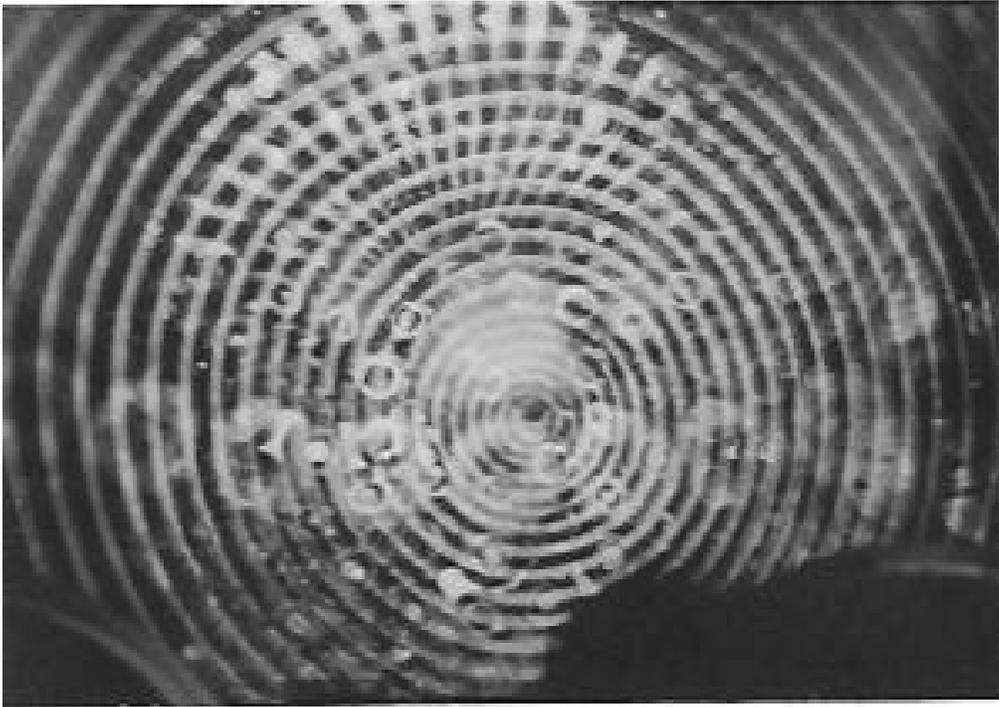
Partially-opened parachute (*top*) becomes Isobe's Floating Theatre for presentation of Jud Yalkut's *Dream Reel* intermedia environment at Oneonta, New York, March, 1969. Photos: courtesy of Yukihsa Isobe.

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three hundred and sixty-degree light shows for rock concerts at the Shrine Exposition Hall from 1967 to 1968. However, after the rock mania subsided, the group became affiliated with artist Sam Francis, who sponsored studios for them, first in Venice, then in an abandoned hotel on the beach in Santa Monica. In almost total obscurity the group perfected an art of light manipulation virtually unequalled by any mixed-media organization with the possible exception of USCO.

It's a combination of Jackson Pollock and *2001*, of Hieronymus Bosch and Victor Vasarely, of Dali and Buckminster Fuller. Time-lapse clouds run across magenta bull's-eyes. Horses charge in slow motion through solar fires. The hands of a clock run backward. The moon revolves around the earth in a galaxy of Op Art polka dots. Flashing trapezoids and rhomboids whirl out of Buddha's eye. Pristine polygraphic forms are suspended in a phosphate void. Exploding isometrics give birth to insects. A praying mantis dances across an Oriental garden. Spiraling cellular cubes crash into electric-green fossil molds. The organic symbiosis of universal man. A huge magnified centipede creeps across a glowing sun. Cascading phosphorescent sparks. Waffle grid-patterns strobe-flash over Roy Lichtenstein's 1930's Ultramoderne architecture. A butterfly emerges from its cocoon. New dimensions of space and time. Bodies become plants. White translucent squids wrestle with geometric clusters. The sound is Terry Riley and LaMonte Young and Mozart, seasoned with Pink Floyd, spiked with Cream.

Unlike other light artists, The Single Wing Turquoise Bird has no definite program; each presentation evolves from the interacting egos of the group working in harmony. What we see cannot be called a work of art as traditionally conceived: a unique, perishable, nonreplaceable entity reflecting the talents of an individual. They don't produce an object in the sense that a movie is an object; they produce software, not hardware. We witness an expression of group consciousness at any given moment. The range of their vocabulary is limitless because it's not confined to one point in time, one idea, one emotion. Depending on the variety of basic materials (they use everything from liquids to video projection to laser interferometry) they can continue into infinity, never repeating a single "word," always evolving visual-kinetic equivalents of the psychic-social cli-



Two images from the constantly-evolving lightworks of the Single Wing Turquoise Bird in their studio at Venice, California. Photo: Gene Youngblood.

mate of the moment. Their work strikes one precisely as a synaesthetic movie, yet a movie in which each image emanates from its own projector, its own human sensitivity.

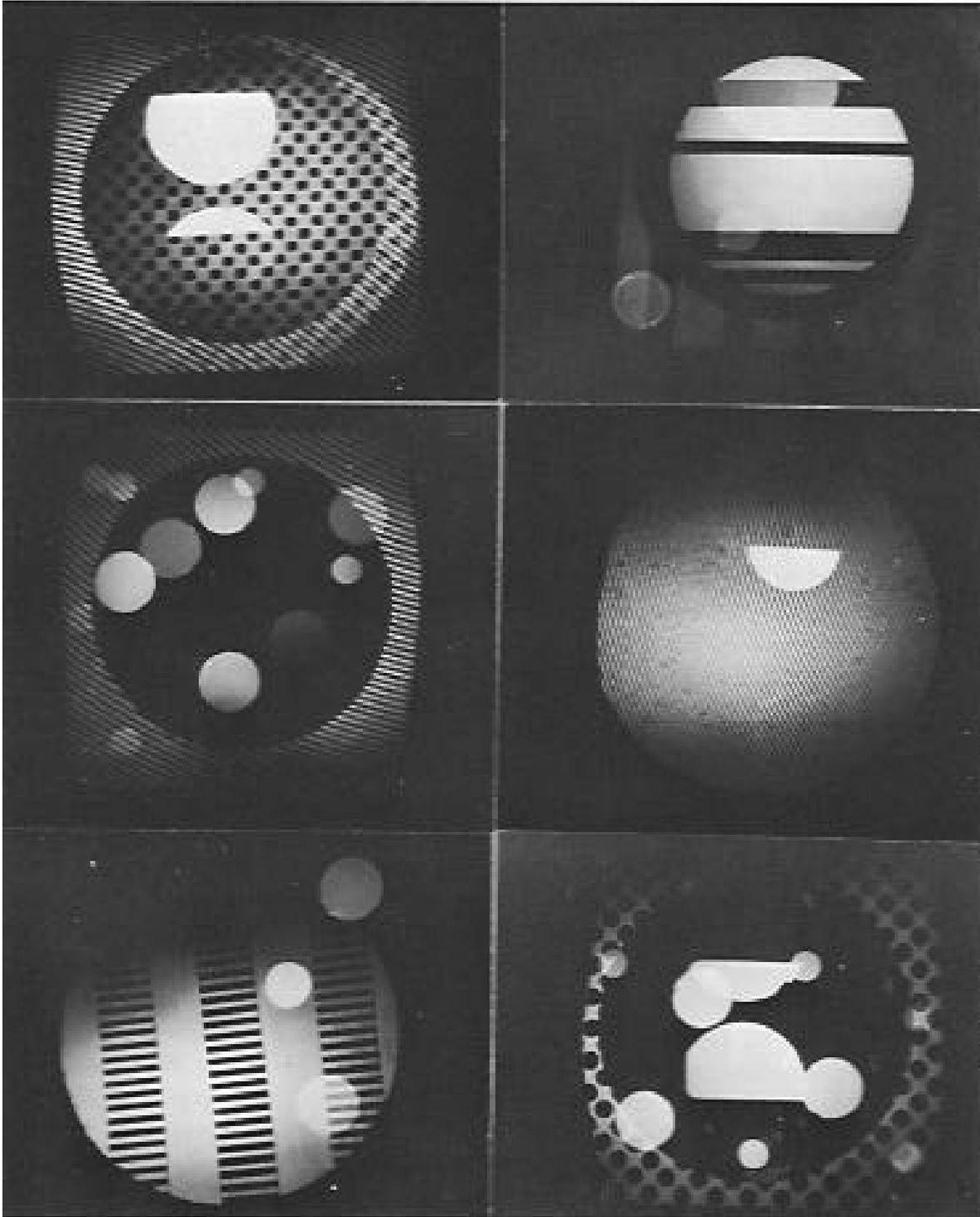
The group: Jeff Perkins, films and slides; Peter Mays, films and slides; Jon Greene, overhead projectors, liquids, technical innovations; Michael Scroggins, overhead projectors, liquids, technical innovations; Allen Keesling, slides, rheostats, improvised equipment; Charles Lippincott, group management.

"Previously," remarked Peter Mays, "all my experience in art was very personal where I had total control. Working with a group there's a whole different kind of feeling, a kind of communication, a collective vision and meaning that's like Hermann Hesse's idea in *The Glass Bead Game*—taking everything in all cultures and communicating comprehensively on all levels of society simultaneously. In a sense that's what the new consciousness is about, comprehensive living. Our language definitely is anti-Minimal. It's a reaction to Minimal Art just as Minimal Art was a reaction to the complexities of Jackson Pollock's Abstract Expressionism. We're making Maximal Art. I see the whole history of visual art in one historical progression and the light show occupies a very crucial position in that line. It seems that the spirit of Abstract Expressionism has been distilled into a pure form in the light show; sort of carrying on the tradition while at the same time transforming it into something more universal."

Jackie Cassen and Rudi Stern: Theatre of Light

The image of a water fountain illuminated by strobe light from below—each droplet frozen in its arc like some priceless crystal in metamorphosis—characterizes the ephemeral beauty of Cassen's and Stern's "Kinetic Light" compositions. Their art is contemplative and peaceful as opposed to the chaos of most intermedia environments. They seek to sharpen one's consciousness, not to overwhelm it. Almost symbolically, their studio/home "and small cosmic game room" in New York is situated just around the corner from the 1920's site of Thomas Wilfred's Art Institute of Light.

Reclining on black cushions in a black-draped room, one encounters light used not as a backdrop for a rock-and-roll group but as "a medium struggling to stand quite independently, a catalyst for its



Sequence of images from *Circles*, a kinetic composition by Jackie Cassen and Rudi Stern, Theatre of Light, New York, 1969. Photo: Roy Blakey.

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own kind of experience." A typical presentation may incorporate as many as six-thousand slides and twenty-five different projectors, many of them designed especially by Cassen and Stern. This Theatre of Light has been seen with opera, in Stravinsky's *Rake's Progress* for the Boston Opera Company; with dance, in the ballet *The Seven Deadly Sins* at Vancouver's Art Festival; with the music of Berg, Messiaen, Mozart, and Scriabin as played by Peter Serkin at the Festival of Two Worlds in Spoleto; for Lyndon B. Johnson at the White House; and for Timothy Leary's "Turn On, Tune In, Drop Out" psychedelic celebrations.

In collaboration with the visionary Japanese architect Yukihiisa Isobe, they have performed kinetic-light events in black vinyl pneumatic domes, transparent inflatables, and other tensile structures. They have extended the use of fiber optics into dazzling perceptual exercises. In *Vibrations* at the New York Architectural League in the winter of 1967-68 they constructed a shimmering universe of mirrored mylar surfaces, water pools and fountains, plexiglass cubes, geodesic, and other polyhedral structures, front and rear projections, and light-activated sound events in which photoelectric cells responded to color as well as intensity.

Together they design and build devices that can be described only as "sculptural projectors"—one does not look *at* the screen in the Theatre of Light so much as one looks *through* it into spatial dimensions defined by omni-directional light from these sculptures. Their weekly, one-hour performances at the New York studio are composed of several brief presentations. For example, one fifteen-minute piece is called *City Windows*, a trip through an infinite night city of faceted windows, surrealistic night traffic, and what Stern describes as "white-line etched images," set against a sound track composed by Cassen and Stern of traffic noises and rumblings on a piano. Another composition, slightly resembling photos of Wilfred's Lumia displays, is divided into six movements corresponding to Bach's *Suite No. 1* for unaccompanied cello. Each movement is conceived as a different kind of "light pastorelle."

Jackie Cassen and Rudi Stern seek "to build a repertoire of light-works, a kind of nonverbal electric theatre prototype for the future." Since they are helping to invent that future, it seems that in the Theatre of Light we actually are seeing through time.